(11)Publication number:

2001-279163

(43)Date of publication of application: 10.10.2001

(51)IntCL

CO9D155/00 CO1B 33/12 CO9D183/07 C09D201/00 H01L 21/768

(21)Application number: 2000-096767

(22)Date of filing:

31.03.2000

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(54) COATING FLUID FOR FORMING SILICEOUS COATING FILM, METHOD FOR PRODUCING SILICEOUS COATING FILM, SILICEOUS COATING FILM, SEMICONDUCTOR ELEMENT USING THE SAME, AND MULTI- LAYER PRINTED WIRING BOARD USING THE SAME

(57)Abstract:

PROBLEM TO BE SOLVED: To provide a coating fluid that can easily form a low-permittivity siliceous film having sufficient adhesion to the adjoining films and undergoing no peeling in a CMP process in a Cu damascening process in good yields a method for producing a siliceous coating film from the coating fluid, a signal- delay-free, high-grade, high-reliability semiconductor element, and a signal-delay- free, highgrade, high-reliability multi-layer wiring board.

SOLUTION: Provided are a coating fluid for forming a siliceous coating film, containing (A) a polysiloxane having a content of organic groups of 1-50% and having a content of unsaturated organic groups of 1-50% based on all of the organic groups and (B) a solvent, a method for forming a siliceous coating film comprising coating a substrate with the coating fluid and drying the wet film, a siliceous coating film obtained by the method, a semiconductor element having the siliceous coating film, and a multi-layer wiring board having the siliceous coating film as the interlayer insulation film.

LEGAL STATUS

[Date of request for examination]

[Date of sending the examiner's decision of rejection]

[Kind of final disposal of application other than the examiner's decision of rejection or application converted registration]

[Date of final disposal for application]

[Patent number]

[Date of registration]

[Number of appeal against examiner's decision of rejection]

[Date of requesting appeal against examiner's decision of rejection]

[Date of extinction of right]